

## Human Pancreatic Cancer Stem Cells: Developing a Novel Drug for Cancer Eradication

### Grant Award Details

Human Pancreatic Cancer Stem Cells: Developing a Novel Drug for Cancer Eradication

**Grant Type:** Inception - Discovery Stage Research Projects

**Grant Number:** DISC1-10583

**Investigator:**

<b>Name:</b>	John Cashman
<b>Institution:</b>	Human BioMolecular Research Institute
<b>Type:</b>	PI

**Award Value:** \$303,894

**Status:** Pre-Active

### Grant Application Details

**Application Title:** Human Pancreatic Cancer Stem Cells: Developing a Novel Drug for Cancer Eradication

**Public Abstract:** **Research Objective**

We will use human pancreatic cancer (PC) stem cells to show 1 inhibits proliferation, self-renewal and cell viability. This paradigm is transformational for anti-cancer drug discovery for patients.

#### Impact

Pancreatic cancer (PC) kills >40,000/yr in the US. PC is a major unmet medical need. Use of PC stem cells in development of 1 will usher in a new paradigm. 1 may be of great utility with other drugs.

#### Major Proposed Activities

- Show 1 potently and selectively reduces self-renewal capacity and cell viability of a human pancreatic cancer stem cell and compare the result with a normal pancreatic cancer cell.
- Show 1 induces apoptosis of a human pancreatic cancer stem cell line via the intrinsic induced cell death (or apoptosis) pathway.
- Show effectiveness of 1 as an inhibitor of the KRAS-NF-κB signaling pathway as a mechanism to eradicate human pancreatic cancer stem cell progression relevant to human patients.
- Summarize the results in a pre-IND report and contact the U.S. FDA. Apply for financial support to do additional IND-enabling studies.

**Statement of Benefit to California:** We will develop a new pancreatic cancer (PC) therapy using PC cancer stem cells. In California, the incidence of PC death is ~5,000/yr. PC incidence is increasing in CA & will be 20% greater in 2020. Therapy for PC is limited to surgery. Combination of chemotherapy & radiation are ineffective. Thus, PC is a major unmet medical need. Successful completion of this work will provide CA citizens much needed advances in PC health technology & improvement in health care & effective anti-cancer drugs.

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